US1A THRU US1M

SURFACE MOUNT HIGH EFFICIENCY RECTIFIER

FEATURES

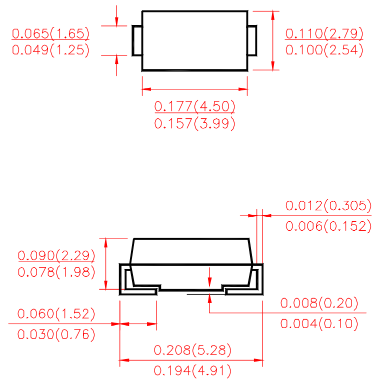
- Plastic package has underwrites laboratory flammability Classification 94V-0
- Built-in strain relief, ideal for automated placement
- Glass passivated chip junction
- Fast switching for high efficiency
- High temperature soldering
  260 /10 second

MECHANICAL DATA

℃

- Case: JEDED DO-214AC molded plastic over glass passivated chip
- Terminals: Solder plated, solderable per
- MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.002ounce, 0.064 gram

DO-214AC(SMA)



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25℃ ambient temperature unless otherwise specified.
- Single phase, half wave, 60Hz, resistive or inductive load.
- For capacitive load derate current by 20%.

	SYMBOLS	US1A	US1B	US1D	US1G	US1J	US1K	US1M	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current At T_A=55℃	$I_{(AV)}$	1.0							Amps
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC Method)	I_{FSM}	30							Amps
Maximum Instantaneous Forward Voltage per at 1.0A	V_F	1.0			1.30	1.70			Volts
Maximum DC Reverse Current at rated DC Blocking Voltage T_A = 25℃	I_R	5.0							μA
T_A = 125℃		100							
Typical Reverse Recovery Time Test conditions I_F =0.5A, I_R =1.0A, I_{RR} =0.25A	t_{rr}	50				100			nS
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	C_J	20				15			pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	88							℃/W
	$R_{\theta JL}$	28							
Operating Junction Temperature	T_J	(-55 to +150)							℃
Storage Temperature Range	T_{STG}	(-55 to +150)							℃

Notes:

1. Thermal resistance from Junction to ambient and from junction to lead mounted on P.C.B. with 0.2×0.2″ (5.0 × 5.0mm) copper pad areas.

RATING AND CHRACTERISTIC CURVES US1A THRU US1M

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

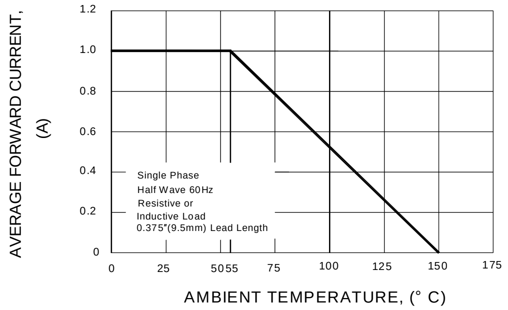


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

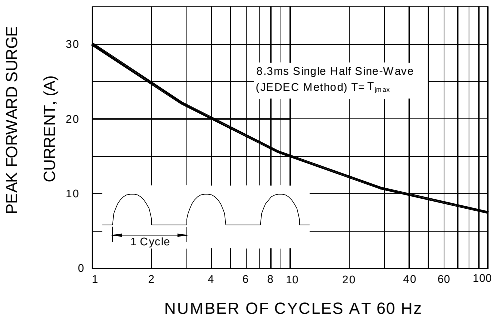


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

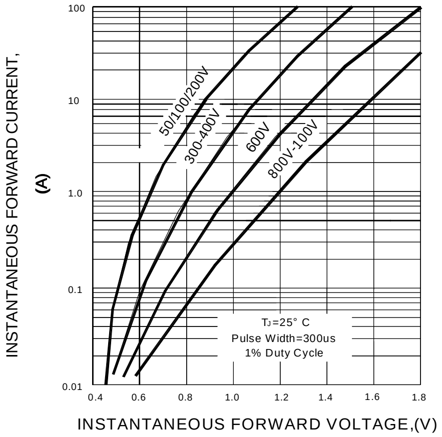


FIG.4-TYPICAL REVERSE CHARACTERISTICS

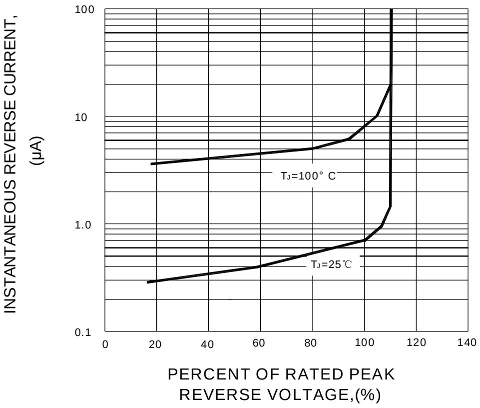
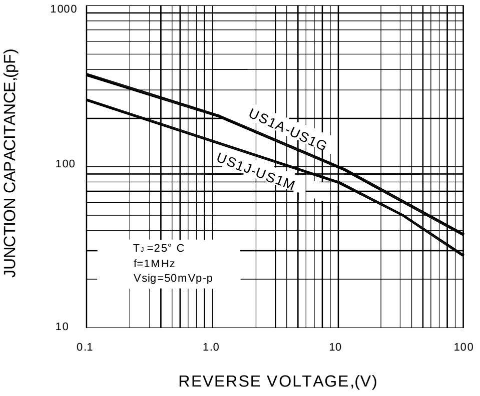
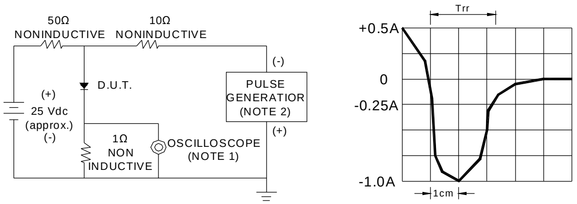


FIG.5-TYPICAL JUNCTION CAPACITANCE



F1G.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



SET TIME BASE FOR
50/100ns/cm

NOTES : 1.Rise Time=7ns mas. Input Impedance=
1 magohm. 22pF
2.Rise time=10ns max. Source Impedance=
50 ohms